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WORK ORDER

DOC	3	REV DATE	010558	DW	010958
ORIG ROUTE	035	OPR	56	VOID	02
ORIG CLASS	3	PGS	5	CLASS	C
JUST	22	CENT NO	2010	AUTH	

TO: [redacted] 25X1

ATTENTION: [redacted] 25X1

SUBJECT: Work Order No. 1
Change No.
Contractor's No. RD-145, T.O. 2

DATE 12 December 1957

You are hereby authorized to proceed with the performance of the work outlined below, subject to the terms and provisions of our current contract.

	WORK DESCRIPTION	QUANTITY	ESTIMATED COMPLETION DATE	FOB POINT
1.	Fabricate XTAL Video Demand System in accordance with specification outlined on Work Attachment A.	5 each	1 March 1958	Customer's Premises

The equipment is UNCLASSIFIED, but the sponsor's association with the contract and/or equipment is classified SECRET.

Breakdown of Estimated Cost *See Cost Breakdown Sheet

[redacted] 25X1

TOTAL FUNDS AUTHORIZED TO DATE FOR WORK ORDER NO. 1 $ 10723.14
INCREASE OR DECREASE AUTHORIZED BY THIS CHANGE NO. ___ $ None
NET TOTAL $ 10723.14

Nothing contained hereon may be altered nor may the total shown above be exceeded without prior authorization of the undersigned or his agent.

APPROVED: [redacted] 25X1

BY _____

Requesting Officer

Please indicate acceptance by completing the portion below in duplicate and returning two copies of this order to the subscriber at the earliest practical date.

Acknowledgment and acceptance of Work Order No. ___, Change No. _____

BY _____ Date _____

Title _____ Company _____

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WORK ATTACHMENT A

I SPECIFICATIONS

A. Video Amplifier (including pulse stretcher)

Gain:	Approximately 85 db (100 uv rms input)
Bandwidth:	850 cps. to 450 kcs.
Power Consumption:	6.0 milliwatts
Transistors Used:	Four SB-100's
Input Impedance:	Approximately 2000 ohms
Pulse Stretch:	Approximately 50 (nominal input)
Size:	1" x 1" x 2 3/4" (excluding lip)
Weight:	5½ ozs.

B. Audio Amplifier

Gain:	Approximately 40 db ± 4 db.
Bandwidth:	Approximately 700 cps to 24 kcs.
Power Consumption:	15 milliwatts
Transistors Used:	Three 2N34's
Input Impedance:	1 megohm
Output Impedance:	30,000 ohms
Size:	1" x 1" x 2 3/4" (excluding lip)
Weight:	6 ozs.

C. Demand Unit

Circuit:	Bi-stable multivibrator
PRF Response:	50 to 5000 pps
Sensitivity (trigger)	1.6 volts peak-to-peak (20°C)
Power Consumption:	Standby - 40 milliwatts
	Operating - 600 milliwatts
Transistors Used:	Two 2N34's
Size:	1 7/8" x 3 1/4" x 3 5/8" (excluding lip)
Weight:	1 lb. 11½ ozs.

D. Recorder - Power Unit

Supply:	15 volts at 1 amp hr. rating
Standby drain:	4.5 ma.
Operating drain:	100 ma.
Consists of 10 Yardney HR-1 cells in series	
Recorder:	Minifon P-55L
	Power Consumption - Standby 0 milliwatts
	Operating 1000 milliwatts

E. Auxiliary - Power Unit:

Supply:	15 volts at 1 amp hr. rating
	Standby drain - 4.5 milliamps
	Operating drain - 100 milliamps
	Consists of 10 Yardney HR-1 cells in Series

Terminal: DPDT Relay Contact Output
Audio output (unpolarized)
common ground connection

Power Consumption: Standby 0 milliwatts
Operating 1000 milliwatts

II GENERAL REQUIREMENTS:

A. The video, audio and demand circuitry should be potted to insure rigidity of components. The recorder - power unit consists of the drive motor and transport mechanism of a P-55L minifon recorder (to be supplied by customer). Provision should also be made in this unit for aural monitoring by means of a crystal earphone.

B. The auxiliary power unit provides the power and switching circuitry for the operation of the system into recorders other than the Minifon.

C. The system should also include a feature to permit its use with an external programming device. The capability should exist to enable use of:

1. The external programmer and demand unit simultaneously.
2. Demand unit alone with the system.
3. Programmer alone with the system.

D. The circuitry should be made such that under requirement (c-1) the programmer would plug into the demand unit and, by means of throwing the "on-off" switch to "off", control the energizing of the complete system. Under requirement (C-2) the system would operate under normal conditions, signal actuate, by means of throwing the switch to the "on" position. Under requirement (C-3) the demand unit could be put aside and the system controlled by the external programmer. This would necessitate plugging the programmer into the audio unit.

E. Finish:

All units comprising the complete system will be of a non-reflecting black finish and will not have any nomenclature or serial number designation on any surface.

F. Government furnished equipment:

(5) P-55L minifon recorders
(1) set of Engineering Drawings, including schematic diagrams, itemized on Attachment B.
(1) XTAL video demand system.

G. Deliverable Items

1) (5) XTAL video demand systems.
2) One reproducible and 3 copies of the schematic diagram, parts list, and manufacturing drawings of any unusual part

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ATTACHMENT B

XTAL Video Demand System

The following is a list of drawings that were given to the contractor:

Dwg. No. 3 Mounting block, Demand Unit

4 Mounting block, Demand Unit

5 Plate, Demand Unit

6 Plate, Demand Unit

7 Plate, switch mounting, Demand Unit

8 Cam, Demand Unit

9 Spacer, Demand Unit

10 Assembly View, Demand Unit

11 Mechanical assembly of Video Unit

12 Case, Video Unit

13 Cover, Video and Audio Units

14 Shield

15 Mechanical assembly of Audio Unit

17 Case, Timer, Demand Unit

16 Case, Audio Unit

18 Cover, Timer, Demand Unit

Schematic Diagrams.

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